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MEMORANDUM

ON THE

REVENUE SURVEY DEPARTMENT,

H. H. THE NIZAM'S GOVERNMENT.

BY

MOULAVIE SYED MAHADI ALI.

1285-1291 FASLI.



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No. 1 of 1882.

To
MOULVIE SYUD MAHDI ALI, Esq.,
Revenue Secretary, H. H. the Nizam's Govt.,
Hydrabad.

From
MAJOR GENERAL GLASFURD,
Survey and Settlement Commissioner.

GULBURGA, 6th August, 1882.

SIR,

I have the honor to submit, for the information of His Excellency the Minister, the enclosed Memoranda of my inspection of the offices of the Superintendents of Survey and Settlement in the Aurangabad and Gulburga Divisions, with notes of my inspection of the Record-rooms of the Talukdar's and Tehsildar's offices at Aurangabad.

It was my intention to have inspected the Tehsildar's office at Pyton, and also to have seen how the village papers are kept by the Patwarees, and with this view Mr. Furdoojee Jamshedjee had made all arrangements by sending on tents, &c., when unfortunately heavy rain set in. Notwithstanding this, we made an effort to get to Pyton; but after proceeding a few miles in that direction, we were obliged to give up the trip owing to the heavy state of the road.

As full details of my inspection will be found in the enclosed Memoranda, I will only state here, briefly, the conclusion I have arrived at from my visits to Aurangabad and Gulburga.

1st. As regards the measurements, mapping, and classification of villages field by field, I have been most favorably impressed with what I have seen, and judging from five years' personal experience of the Bombay Revenue Survey, I feel convinced that the work done by the Aurangabad and

Gulburga Survey Departments, will compare favorably with that done by any similar establishments either in Bombay or Berar.

2nd. I think there are some matters of detail and internal administration, which will admit of economy, without endangering or impairing the present efficient condition of the establishments, or the excellent character of the work done.

3rd. The short time I have passed at Aurangabad and Gulburga, and my inability to move amongst the people does not permit me to speak of the actual working of the settlement.

4th. I think it may be possible to reduce the cost of boundary marks. The present cost to each holder of a field will probably be found to range from about two rupees to four, and even five rupees, and as this has to be paid before the people have a chance of comprehending the benefits of the settlement, it is not to be wondered at if it has the effect of introducing the survey and settlement in an unfavorable light.

5th. I saw all the Assistants and Sub-Assistants several times. They appear to be an efficient body of officers. They are all familiar with the language of the records, Mahrathi, and whatever their nationality, all keep their books in Mahrathi; I was agreeably surprised to find that both Mahomedans and Parsees were perfectly at home in the vernacular.

6. Much credit is due to Mr. Furdoonjee Jamshedjee and Mr. Kader Beg for the efficient condition in which they maintained their establishments, and the out-turn of the work done. They appear to have exercised supervision with intelligence and judgment; and all branches of the Department bear the impress of their zeal and industry.

7th. As one who has had several years' experience of both the Bombay and North-West Provinces system of

Survey and Settlement, I cannot conclude without expressing my high appreciation of the ability and perseverance by which you have brought the Survey and Settlement Department, in such a comparatively short period, to its present high state of efficiency.

8th. I must express my best thanks for the kind attention that has paid me during my tour by Mr. Furdoonjee Jamshedjee, Mr. Kader Beg, Mr. Burjorjee Manockjee, Talukdar of Aurangabad, and Mr. Ikram Ulla Khan, Sudder Talukdar of Gulburga.

I have the honor to be,

Sir,

Your most obedient Servant,

(Signed) C. L. R. GLASFURD,
Survey and Settlement Commissioner.

Notes of Inspection of the offices of the Superintendents Survey and Settlement Aurangabad and Gulburga Divisions.

The buildings in which the Superintendents have their offices, both at Aurangabad and at Gulburga, are in excellent order and in every way suitable for the purposes for which they were constructed. The accommodation is ample for present requirements.

At Aurangabad the Assistants in charge of measuring establishments find their own offices. At Gulburga all establishments are under the same roof.

There are sixteen Assistants and Sub-Assistants on the strength of the Aurangabad Survey Department, and thirteen on the Gulburga Department.

With the exception of two or three absent on leave, I called nearly all these officers before me separately, examined minutely their field books and plots, noticed the results of checks exercised in the Superintendents' offices, and ascertained the progress of the work made by each officer, and the difficulties, if any, encountered by them.

I found the field books, with one or two exceptions, very well kept, and the work done in a business-like manner. The plotting is neatly done and the areas of fields correctly calculated, as is proved by the tests taken of the work of each Assistant in the offices of the Superintendents.

I made one Assistant take a test of five fields of a village close to Aurangabad in my presence, and was satisfied with his style of doing work. The work when plotted proved to be very accurate.

Similarly I took a test of the classification of another village. On this occasion two Assistants and one Sub-Assistant took separate notes without any commu-

nication with each other. The result disclosed a very slight difference in the opinion of the value of land of all the testers.

Tests could not be taken at Gulburga, as the survey operations have not yet arrived at that point.

I saw the examination of books and maps that is being done at Head-Quarters in the offices of most of the Assistants, and in the Superintendents' offices in all its stages. The system of check maintained is very good and ensures that what is done is sufficient in quantity and good in quality.

I examined the office account books of most of the Assistants in charge of measuring establishments, and was satisfied with the manner in which they are kept. Care will have to be taken that no Assistant retains more Government money in his custody than is absolutely necessary.

I examined the lithographic and printing presses. They are under sufficient supervision as to the amount of work turned out and the quantity of paper used.

I examined the method on which the copies of village Fair Village Maps. maps are tested and their copies prepared. The checks maintained for the detection of errors, and to ensure accuracy are ample.

I made a careful inspection of the records of some villages of those portions of the districts that have been settled, calling for papers at random, and satisfying myself, that any document that is required can be produced without delay.

The manner in which the records are filed, and their registers are kept, is very satisfactory. Nothing could be better than the arrangement of the Record-room at Gul-

burga which is fitted up with racks for keeping the records in complete order.

I made a careful inspection of the Store-room registers

Stores.

and the stock in hand on the date of inspection. The store-rooms are

divided into three sections: Contingencies, instruments and stationery. I traced articles entered as contingencies from their purchase from the local traders to the entries showing payment for them in the Accountant's Department which is under the Deputy Superintendents, and to the entries showing to whom the articles had been issued. I went carefully through the books showing the stock in hand of instruments and stationery and their issue to the different establishments.

I further satisfied myself by actual inspection of the balances of stock in hand of various articles, and comparing these with the entries in the registers that the articles were really in hand at the date of my visit.

I was perfectly satisfied with the result. Everything is done to check the irregular or unauthorized issue of stores to any Departments.

In Gulburga the store-room is being fitted with racks, &c.; this, when completed, will be a great improvement on the present method of keeping stores in boxes and almira's.

I examined the Accountants' Department which is under

Accounts.

the supervision of Deputy Superintendents, and satisfied myself that

no money can be paid without an order from the Superintendent or Deputy Superintendent; that receipts are taken for payments, and the accounts rendered with punctuality to the Accountant-General.

(Signed) C. L. R. GLASFURD.

MEMORANDUM

ON THE

REVENUE SURVEY DEPARTMENT,

H. H. THE NIZAM'S GOVERNMENT,

BY

MAULVIE SYED MAHADI ALI.

As I am about to sever my connection with the Revenue Survey Department, with which I have been associated from its commencement in 1285 Fasli (1875-76), down to the present date, a period extending over seven years, I wish to place on record a brief outline of the circumstances under which the work was started, the progress it has made, and the results hitherto attained.

The survey operations were first started in the Aurangabad district, it is desirable therefore that I should preface my account with a few remarks on the past revenue management of that tract of country, and speaking broadly, these remarks may be applied to the whole of the Mahratta Districts of His Highness' Dominions.

Up to the year 1263 Fasli (1853-54), it had been the

custom to farm out the land Revenue to irresponsible individuals, who, naturally enough, made it their duty to extort as much money as they could from the raiats. Having this end in view, they employed every means in their power to attain it. The farmer's chief officials were the Sudder Naibs and Naibs, on whom devolved the duty of fixing the annual assessments and collecting the Revenues. The annual settlement was made on the most primitive principles, the Sudder Naib assessing each pergunna in a lump sum, and the Naib distributing this sum over each village. The Patel and Patwadi in their turn apportioned the sum fixed on their village among the cultivators, and holding lands themselves, it was their interest to see that their own and their brethren's share was made as light as possible. Thus while the favoured few escaped with light assessments the main portion of the cultivators were ground down with inordinately heavy exactions. This inequality of assessments led to the impoverishment of most of the raiats. About 1264 Fasli the system of Revenue farming was abolished, and the State undertook to deal directly with the cultivators, the practice of assessing villages in the gross was discontinued, and a method of assessing each individual cultivator was introduced. These measures were, I need not say, highly beneficial to the raiats. The cultivator's tenure was now secure, and he did not live in fear of annually enhanced assessments. The area under cultivation steadily increased, and there was a proportionate enhancement in the revenue. In spite, however, of these improvements, much yet remained to be done. The fields had not been accurately measured; the soils had not been classed according to their relative values; and as a natural consequence, it followed that the assessments were very unequally distributed on the different holdings. From 1275 down to 1284, most of the Revenue officers continued to represent this state of things to

Government, and to urge the necessity of fixing equable assessments on the lands. Government sought to remedy these evils by having some talukas surveyed by Patwadis. But this experimental measure did not succeed; in fact, it only made matters worse. The revenue officers then urged upon Government the necessity of a regular survey and settlement. Government, therefore, finally decided in 1285 Fasli, upon starting survey operations without any further delay. Experimental operations were first commenced in the Paitan taluka, and as they proved successful, the work was gradually extended to other districts. The following quotation from my Annual Report, submitted to Government in 1295 Hijri, gives a chief account of the beginning of the work.

"As stated in the second paragraph of the Superintendent's Report, survey operations were at the outset, undertaken merely as an experimental measure, and on two different systems, with a view to ascertain by actual trial which was best adapted to this country. In some villages they were conducted on the principles prevailing in the North-West Provinces; while in others, the Deccan system was adopted. The points of difference between these two methods were carefully noted, and their relative advantages and defects minutely observed. My long and intimate acquaintance with the system in the North-West Provinces had naturally prejudiced me in its favour, and I must candidly confess that if the matter had solely rested in my hands, I would have introduced it here in preference to that obtaining in the Deccan. But as the Government did not leave the choice entirely to me, but desired to see for themselves the results of both these systems before making a final selection, it was determined to inaugurate the survey in a few villages by way of experiment on either of these methods. This resolution having rendered it necessary for

to inquire into the principles of the Bombay system, with which I was a perfect stranger, I took pains to study its rise and progress contained in the various able reports written by the gifted officers with whom the system in question originated, and in the controversy which was carried on for some time between the Board of Revenue, North-West Provinces, and the Bombay Survey authorities. And not to rely on mere secondary knowledge and information, in obedience to Government orders, I travelled over the Poona, Ahmednuggur, Khandesh, and Akola districts, and made myself personally acquainted with the working of the survey in these parts. These inquiries proved very useful in the end, for they convinced me that the Deccan system was more suited to this country, and that the introduction of the other would not only be attended with serious consequences, but would revolutionize the whole system on which the administration of the land Revenue was carried on; because however suited the latter system might be to the North-West Provinces, where the zemindari tenure is the prevailing form of occupancy, it would not answer in this country where the ryotwadi system prevails. Moreover, in fixing upon the Bombay system we would be following a sure guide, for it is now upwards of thirty years since it was first introduced into the greater part of the Bombay Presidency, during which period it has been attended with signal success. Ultimately, therefore, I recommended to the Government the adoption of the Bombay system, which they were pleased to sanction on an examination of the result produced by the trial survey. Our present operations are conducted on that system, with the exception of a few trivial changes in the minor details effected to suit local circumstances. It is to the adoption of this system that the success already achieved is mainly due, for it has saved us from many errors in to which it was easy to fall."

Tipwadi of half of the Patwar tabula was surveyed and several villages chosen, under my direct supervision, hence I had a great opportunity of observing the working in detail of the Bombay Survey system, and forming my own judgment in the matter.

At the outset we had great difficulties to contend with. I, and most of the men under me, were new to the work, it will, therefore, readily be imagined that the supervision was not what it ought to have been. The work, for want of method and experience, was not conducted on any uniform principle. The measurements were carried out both by the plain table as well as the cross staff and chain, and while some field books were kept in one form in Persian, others were kept in another form in Marhatta. The division of land into survey numbers was not in all cases made according to rule. The work of erecting the boundary marks was very unsatisfactorily performed. The holders of land had been directed to construct their own marks, and as they had no time to spare from their own field work, they were naturally remiss in doing so. And thus weeks elapsed before the marks were erected, and a great deal of the measurer's time was in consequence lost. In many cases owing to the raiat's ignorance most of the marks that were constructed were not made to fall straight on the boundary lines. Acting on the experience gained in the year following, the practice of getting the raiats to erect their own marks was discontinued, and the work was given out on contract to experienced men. The Beega was the standard of measurement first adopted, and the lands of upwards of a hundred villages were measured accordingly. At this stage we found that according to the standard adopted, the maps that would be prepared by the survey would not correspond with the maps got up by the British Survey, for this reason that their standard of measurement was the acre while ours was the beega.

Their measurements were made by a 33 feet chain, and their village maps prepared on a scale of 20 such chains to an inch, whereas our measurements were carried out with a 36 feet chain, while the maps were got up on the same scale of 20 chains to an inch. I at once represented to Government the necessity of adopting the English statute acre as the unit of measurement instead of the beega, and Government were pleased to sanction my proposal. Thenceforth the acre was adopted as the standard. The boundaries of such maps as were prepared on the beega measurement were extended to meet the new scale.

It will thus be seen that we were beset with many difficulties in our first attempt in carrying out survey operations. We had no organised staff of trained measurers and supervisors, and it was a matter of great difficulty to obtain the services of trained men for the work. The following quotation from my Annual Report sent in 1295 Hijree deals with this portion of the subject:—

“It will be acknowledged that special qualifications are necessary in the officers, before accuracy and perfection can be ensured in survey and classification operations, and that it is not without considerable experience that good measurers and classifiers are made. Unless, therefore, we collect proficient and experienced men, the work cannot be expected to get on well. When commencing operations, we were able to obtain a few hands from Poona and elsewhere, but they were found wanting in the requisite qualifications and in local knowledge. But since Mr. Furdoonjee took charge of this Department, he obtained a number of qualified hands for the work, and Mr. Beynon also kindly furnished us with some competent men. But this slight accession of strength was insufficient for carrying on the work, and more officers were necessary. I, therefore, solicited the Government in my

letter No. 20, dated the 29th Rajab 1293 Hijree, to permit me to train men for the work, and they were pleased to sanction my proposal in letter No. 2129 of the 28th Shaval 1293 Hijree, and in the order of His Excellency the Minister No. 2196, dated 26th Shaval 1293 Hijree. In pursuance of these instructions the work of education was taken in hand.

“I adopted two measures for training men. The first was to give them a practical knowledge of the working of the Revenue Survey, by sending them to the actual spot when the operations were being conducted, under the supervision of Mr. Furdoonjee. The second was to impart to them a theoretical knowledge of the work, for which purpose I established a school at Hyderabad which I personally superintended. In establishing this school, the main object in view was to induce the sons of noblemen and of the wealthy middle-class in His Highness' territories to undergo a thorough training in the work of the Revenue Survey, for it cannot be gainsaid that the subjects of His Highness have greater and more immediate claims to the service than foreigners, and that it is the duty of the Government to qualify them for the work by training. Of the men trained under the Superintendent, some belonged to the Roorkee College, and some had served either in the North-West Provinces or in the Punjab Surveys. These men required no theoretical knowledge of our system; all that was wanted was an acquaintance with the rules and regulations in force. Others, indeed, were quite new to the work, but they passed their examination creditably, and were placed in charge of measuring establishments. I have every reason to hope that of the men now being trained, nearly two-thirds will be able to pass the necessary examination. As regards the training school of Hyderabad, the inducement of getting a monthly salary attracted at first nearly three hundred students to the establish-

ment, but most of them could not long stand hard work, and their names had to be struck off the roll, owing to irregular attendance and idle habits. Of the remaining, nearly eighty students were able to pass the necessary examination, and were pronounced qualified for service. A few students were sent up to your (Sadar-ool-Maham's) office for examination, and the result was satisfactory, as in your letter No. 696 of the 28th Rubisani 1294 Hijree, to the address of His Excellency the Minister, you state— 'The students were examined by us, and it gives us much pleasure to state that the knowledge they had acquired of their work in a surprisingly short period was highly creditable to the teacher, and afforded ample evidence of the pains that had been taken in their training. The students can read and write Mahratta very well, and the progress they have made is highly creditable.' His Excellency the Minister, in his reply, conveyed in his letter No. 710 of the 5th Jummadiavul 1295 Hijree, wrote as follows :—

"Undoubtedly the acquirements of the pupils bear conclusive testimony to the care and pains that have been bestowed on their studies by the teachers. Still it is essentially necessary that the pupils themselves should also evince the liveliest interest in their studies, and if this is done the pupils and the teachers will be deserving of the highest praise."

"It is with feelings of regret that I have to record that the people of this country are, by their natural disposition, unsuited to serve in this Department of the Public Service, the reason lying in the fact that their indolent and sedentary habits make them unfit for the hard physical exertions which a surveyor has to undergo almost every day. Those of them who have qualified themselves for the task turn out a very small quantity of work, in comparison with what their brethren from other parts of

the country accomplish. Complaints are constantly received on this head from the Superintendent and his Assistants. It will be observed from Mr. Beynon's diary, that he too expresses doubts as to whether the men who are being taught will make hard working surveyors. The same kind of complaint is made in Mysore and in several other places. It will, I am afraid, be long before the inhabitants of this province can bring themselves to work as hard as the Brahmins of Dharwar or Khandesh, or the natives of the North-West Provinces."

I would here briefly define what the powers of the Commissioner and the Superintendents are, and their official relations to one another. The Commissioner submits his annual budget to Government, specifying the amount required for each survey under different heads. Once the budget is sanctioned, the Commissioner has power to divert the sums sanctioned for one head to another head, so long as he does not exceed the total sum sanctioned for each survey. The details of all administrative arrangements connected with the work and establishments over which he exercises control are left to the Commissioner. Owing to diversity of circumstances, a certain method of practice in one survey may be found unsuitable in another survey, and as the Commissioner is the best judge of these matters, he arranges all details as seem to him best suited to the state of the country in which the survey is working. The internal management of the survey is left to the discretion of the Superintendent. The appointment of assistants and sub-assistants rests with the Commissioner, but as a rule the Superintendent nominates them, and sends up their names to the Commissioner for sanction. As these officers have to work directly under the Superintendent, who is the responsible head of his survey, it is necessary that he should have a voice in the appointment of his subordinates. With the exception of the assistants and sub-assist-

ants, the appointment of other officers in the different branches of the survey rests entirely with the Superintendent. With the exception of the Aval Carkoon, the appointment of the office establishment rests with the assistant in charge. Confirmation of the Superintendent is required to the nomination by the Assistant of any measurer or classers.

As regards the office routine work, and the manner in which the survey work is carried on, I cannot do better than quote here from the diary kept by His Excellency the Minister during his visit to Aurangabad in the year 1880: in his diary of 17th January of that year His Excellency says:—

“ At half-past one this afternoon I went for the inspection of the Revenue Survey Office. In this office there are two different establishments, one under the Superintendent himself, and the other under his Deputy. Besides exercising general supervision over his own and other office establishments the Superintendent has special control over the different measuring and classing establishments. To the Deputy is entrusted the supervision over the accounts, stores, printing and mapping branches. The Superintendent himself cannot directly send for any sums of money from the Treasury, nor can he make any disbursements of money, except through his Deputy. The former merely issues the necessary orders, while the latter executes them. Owing to this system, regularity and accuracy are ensured in the accounts, while the work in the stores and mapping branches is carried on with efficiency. I first examined the work that is done under the Superintendent's direct supervision. Mr. Furdoonjee Jamahedjee, the Superintendent, submitted to me all the papers relating to one of the villages already surveyed, by the aid of which he explained to me all the details connected with the operations of mea-

surement and classification in a most lucid manner, enabling me to form a clear conception of all that is done from the time when measurements are commenced to the time when the assessment is made and declared.”

“ The work in this Department is carried on in the following manner:—

“ Each division is placed under a superintendent, who has a staff of assistants under him. Each assistant, placed in charge of a measuring establishment, has a deputy with 25 to 36 measurers; if in charge of a classification establishment he has a deputy with from 12 to 20 classers. In addition to the foregoing establishments, each assistant has three Carkoons (Maharatta clerks) and four peons. The establishment under these assistants are named alphabetically, being called the A, B, C, &c., Establishments. The measurer daily makes reports of the amount of work performed to the assistant in charge, and the latter reports weekly to the Superintendent, who forwards his diary as well as those of his assistant's to the Survey Commissioner, and this official is thus enabled to supervise the whole of the work done by the Superintendent and his subordinates. I have examined the different diaries, from the measurers' upwards to the Superintendent's, and I have come to the conclusion that this rule has been strictly observed since the very commencement of the work. The diaries of every officer are bound in a volume, and carefully kept to be shown to any superior officers who might wish to examine them. The system of keeping diaries is very useful, as it is a check upon idleness among subordinates, who are thus compelled to be industrious, and to give true and unexaggerated account of every day's work. When it appears from these diaries that any subordinate has not executed his work in a satisfactory manner, or has been unpardonably idle, an explanation is at once called for, and should such explana-

tion be deemed unsatisfactory, the offender is fined, and on a repetition of the offence dismissed. In addition to these checks, superior officers while on tour make a careful inspection of the diaries of their subordinates and test their correctness. For example, a measurement is checked on the spot by an assistant or deputy assistant, and the diaries of the latter officers are again checked by the Superintendent during his tour, and the result reported to the Revenue Minister, who submits the whole to the Minister. From the foregoing it will be seen that the whole of the members of the Department, from the highest to the lowest, are compelled to perform their duty.

"I desired some of the diary files to be produced, and found on careful examination that this portion of the system is so excellently conceived and carried out, that it is impossible for faults of any description, either departmental or personal, to remain unchecked. The Assistant Survey Commissioner travels over the districts for eight months in the year. This officer, Mr. Aga Shaikh Mahomed, makes a careful inspection of the works of the superintendents and their subordinates. * * * The Survey Commissioner himself has also expressed his high satisfaction with this gentleman's work. His reports are forwarded weekly to the Survey Commissioner, and they are those of a thoroughly independent official. It is a matter of satisfaction to me to notice that this officer discharged his duties with great zeal and ability during his tour through the whole of the division last year. He examined the work performed by the majority of the establishments, and from his reports I am satisfied that the work generally of the whole Department is carried on satisfactorily and honestly; that the whole of the officials whom he has examined from the highest grade to the lowest deserve great credit for performing their work with zeal and ability. Any misbehaviour or want of atten-

tion on the part of any of the officers is enquired into in the most satisfactory manner.

"The work of the Survey Department is also frequently supervised by the Revenue Minister and the Minister himself. A monthly Progress Report of the work performed by each Superintendent is submitted to the Survey Commissioner. This report exhibits the number of establishments working under each assistant, the number of acres measured or classified, and all details of expenditure, such as the salaries of the Superintendent and his staff and the Assistant Superintendents and their subordinates; the expenditure per acre, and the reasons for the dearth or cheapness of the work done. The Survey Commissioner, to whom these monthly reports are submitted, after perusing and passing any immediate orders upon them, which are necessary, forwards them to the Revenue Minister who transmits them to the Government for any further directions which may be necessary. In this manner Government is kept well informed regarding the progress of the work, and is enabled to institute comparisons between the monthly records at the end of each official year; a progress report for the past twelve months is prepared by the Superintendents. This report is modelled on those of the Berar Survey, with a few necessary alterations. I am also fully satisfied with the manner in which the mistakes in the measurers' and classers' works are checked and set right. The assistants are out on tour for eight months in the year, and while on tour they re-measure ten per cent. of the surveyors' work by means of a theodolite, and submit the result from time to time to the Superintendent. In the same manner ten per cent. of the classification work is also examined by the assistants on the spot. During the monsoon months the plans and maps of every separate field are again checked, and any errors discovered are at once

corrected. On examining a few of the test plots of the assistants produced by the superintendents, I was satisfied that the above rules were strictly observed. Mr. Beynon, the Survey Commissioner of the Berars, checked the classification of the three Talukas in the district and found the results to be accurate."

Herewith I append a statement showing the cost of the Superintendents, and establishments, their Deputies and establishments and the measuring and classing establishments:—

Serial Number.	OFFICERS.	NORTH-WESTERN DIVISION.			WESTERN DIVISION.			Grand Total.
		No. of Officers.	Pay and Allowances.	Total Amount.	No. of Officers.	Pay and Allowances.	Total Amount.	
1	2	3	4	5	6	7	8	9
1	Superintendent	1	950		1	730		
2	Munshes, Persian Department	4	130		5	220		
3	Tinnak Sor and Mahraha Correspondence Department	3	161		5	290		
4	Jamabandi Sherishtedar and Carpoons	5	195		3	190		
5	English Writer	1	35					
6	Medical Department	4	100		3	90		
7	Temporary Jamabandi Establishment							
8	Peons and Lascars	12	111		14	127		
		30	2,282	27,284	31	1,945	22,340	50,724
9	Deputy Superintendent	1	490		1	390		
10	Head Accountant and Establishment	7	229		7	258		
11	Correspondence Branch, Persian and Mahraha	6	131		6	152		
12	Establishment for Stores	7	100		4	229		
13	Record Establishment	17	300		15	275		
14	Mapping Department	10	120		16	242		
15	Printing Department	11	165		9	80		
16	Peons, &c.	62	1,539	18,708	62	1,719	20,628	39,336
	THREE CLASSING ESTABLISHMENTS.							
17	Assistants	3	1,170		2	580		
18	Sub-Assistants	3	470		2	330		
19	Carpoons at 3 per each Establishment	9	193		6	124		
20	Classers at 20 per each Establishment	60	1,140		44	908		
21	Learners at 4 per each Establishment	12	120		10	100		
22	Peons at 6 per each Establishment	18	114		8	72		
		105	3,337	42,444	72	2,174	20,668	68,332
	THREE AND A HALF MEASURING ESTABLISHMENTS.							
23	Assistants	4	1,403		4	1,310		
24	Sub-Assistants	5	825		3	435		
25	Carpoons at four per Establishment	15	291		15	296		
26	Measurers	12	2,240		120	2,163		
27	Learners	12	93		14	140		
28	Peons	16	128		14	135		
		164	5,010	60,480	170	4,527	54,324	114,804
		361	12,418	149,016	335	10,365	124,380	273,396

As regards the strength of the measuring and classing establishments, there is a slight difference between our system and that prevailing in the Berar Survey. In Berar they had from 20 to 22 measurers and from 12 to 15 classers in each establishment, under one assistant, and here we have from 30 to 32 measurers and 20 classers in each establishment, under an assistant and sub-assistant. Seven years' experience has convinced me that our system is much better than the one prevailing in the Berars, and I would strongly recommend its continuation. The reasons for my preferring this system are as follows:—Whenever an assistant is ill or absent on leave, the sub-assistant is able to carry on his duties, and being trained to the work and knowing every measurer in the establishment very well, he is in a position to perform his work in a much better manner than an outsider who would be sent to officiate for him. Secondly, this measure entails great economy, for an increase in the number of measurers leads to a proportionate increase in the amount of work turned out, while the cost of the office establishment is the same for 32 measurers as it would be for 22. In the third place, owing to there being two officers to superintend and test the measurers' or classers' work, greater efficiency is secured, and a larger percentage of test work done, than would be the case if the work was tested by only one officer. Lastly if Government wished to extend survey operations, a number of trained and experienced officers will be found ready at hand to carry them out. And here I would mention that many of the sub-assistants are badly paid, and it was my intention to raise their salaries next year. In my opinion no sub-assistant ought to get less than Rs. 150 per mensem, besides his horse and tent allowance, and in the budget that is being prepared for the coming official year, their emoluments are raised to the extent mentioned.

When once the survey operations had been fairly started,

and a few talukas had been measured and classified, I considered it desirable for my own satisfaction, that the work done should be checked by some able and experienced officer of the British Revenue Survey. Accordingly, at my request, the services of Mr. Beynon, Superintendent Berar Revenue Survey, were obtained from the Resident by His Excellency the Minister. From about the end of November, 1877, until about the beginning of January, 1878, Mr. Beynon travelled over the Aurangabad District, and personally tested the measurement and classification work in some of the Talukas, including Paitan, where the survey had been first started. The results were very satisfactory, as will be seen from the following extract from the concluding portion of M. Beynon's diary:—
 "It is only necessary for me to add, in conclusion, that the work has been carried on exceedingly well. Out of all the numbers which I have tested, in only one has the difference in measurement amounted to three per cent., while in classification the difference has in no case amounted to two annas. The mounds and stones have been erected according to regulation, although in some villages the *bāndhs* have been somewhat in arrears. The office records in all branches are neatly and carefully kept, and the work has progressed rapidly, except when delayed by sickness among the measurers, or owing to villages being deserted by famine, and at the same time the expenditure has been reasonable." Speaking about the cost of the Survey Mr. Beynon says:—"The total cost for the Department last season was very reasonable, and owing to the small pay of the Superintending Officers, the low rates (about one half) paid for boundary marks, and also to the fact that flagholders and chainmen receive no payment, the cost per acre was much less than in Berar. The cheapest rate at which the work was ever done in Berar was in the season 1862-63, when the cost per acre was

2 annas $\frac{3}{4}$ pie, and that was when the boundary marks were erected by the villagers and not by contract, while latterly the cost per acre was generally over 3 annas, while the cost of the Aurangabad Survey last season was only 1 anna $11\frac{1}{2}$ pies (British) per acre.* As regards the rates at which contracts for the erection of boundary marks were given out, Mr. Beynon writes:—"The total expenditure on the boundary marks last season was Rs. 1,18,779, of which Rs. 79,186 were spent on mounds, and Rs. 39,593 on stones. The contract rates were Halce Sicca annas 5-4* for mounds and 6 annas for stones, these rates are very reasonable and much less than the lowest contracts entered into in Berar, where the rates were Government annas 10 and annas 6 respectively." I would here state that about the year 1288 Fasli, owing to the scarcity of labor prevailing upon the cheapness of grain, the rate per earthen mound was increased from six annas to six annas six pies.

At first sight it would appear as if these rates were somewhat high, but then it must be considered that the contractors have to get their labor from great distances in the British territories. Then again the work is scattered over great distances, over portions of so many hundreds of fields in different villages at one and the same time, which involves a great amount of supervision. Besides employing a large agency for supervision, the contractors have to spend a large sum in the purchase of tools; they have to give securities, and they also have to make advances to the laborers they import, and in many cases they lose money if the latter abscond.

One year I invited tenders for the construction of boundary marks, and a few applications at lower rates than we were paying were received. I could not, however, trust the applicants to carry on the work satisfactorily, and so I rejected the tenders. If the contractor is new to his

duties, and has not had experience in organizing and distributing the required labor, his work is naturally retarded, and this delay has a detrimental effect on the work of a hundred and odd measurers in the different establishments, disorganizes the system on which they work, and causes a heavy loss to Government. Even with the experienced contractors we have, delays occur at times, when the contractors are fined in a certain fixed sum for every day's delay. At times when stones are not to be procured near the spot, the contractors have to get them either on carts or donkeys from distances of twelve and fifteen miles. In the Telengana country, where any amount of stones can be had, the rates are very low, less than half of what we pay.

But while quoting from Mr. Beynon's diary all that he said in praise of the work done, I must not omit to mention the one fault he had to find in our system of testing. In his diary of the 2nd January, 1878, he writes:—

"With the large number of measurers at present attached to each establishment, a large amount of the testing has necessarily to be left to the *Nimbandars* or testing Car-koonas, as the assistant is not able to do the whole of it himself, and there is consequently a natural tendency to throw the chief portion of the testing on the former. I think, therefore, it would be more satisfactory if the measuring establishments were reduced to an average of about 22 men each, which is considered a fair complement in Bombay and Berar, and let the whole of the work be done by the assistant himself. If the Bombay or Berar Progress Reports are consulted, it will be seen that hardly any testing by native agency is allowed, on an average not more than one or two tests per establishment during the whole season, and these only in very exceptional cases when circumstances have prevented the assistant from taking the test himself. I observe that some of the mea-

* This is a mistake; it was six annas.—M. A.

surers newly appointed draw only Halee Sicca Rs. 10 and even Rs. 8 per mensem; considering the work they have to do this is too little. In Berars 'Shiknars' or learners, received Rs. 8 and Rs. 10 (Government), and articles of consumption are much dearer now than they were formerly. On being appointed to a village, a measurer received Government Rs. 12, and after six months if his work turned out well, he was entitled to an increase of Rs. 15, and after that his pay was raised by periodical increments of Rs. 40. In Berar there were three peons attached to each establishment on Rs. 8 per mensem, while here there are four, the additional one being required for the "Nimntandar." The peons draw Rs. 7 H. S. each, being an aggregate of Rs. 28 per establishment; if the establishments are organized as they were in Berar, the Nimntandar being abolished, it would then only be necessary to retain three peons, and in that case I would suggest that their pay be increased to Rs. 8 each or Rs. 24 per establishment. It is evident that men in the position of measurers and survey peons have numerous opportunities of extorting money or provisions from villagers, and it is difficult to find fault with them unless their pay is such as to raise them above want; if their pay is sufficient they can have no excuse."

I would here explain that when we first started work we had no trained agency for testing. Our Assistants had to be trained to the work, and being new to it their manner of work was rather slow, and therefore they had testing Carkoons to assist them. Had it not been for this measure, the Assistant alone would never have been able to do all the testing work himself. But directly the Assistants acquired experience in the work, the testing Carkoons were done away with in the latter part of the year 1878. We have not a single testing Carkoon now, all the test work being done by the Assistants and Sub-Assistants themselves, and I believe the percentage of testing done by them in

each establishment is a little higher than what obtained in the Berar Survey. As regards the suggestion made by Mr. Beynon with respect to the salaries of the measurers, I would observe that acting upon his advice, I raised them, and no measurer is now employed on less than Rs. 12 per mensem. In January of the year 1880, His Excellency the Minister visited Aurangabad, and a little later he was joined there by the Resident, Sir Richard Meade, Colonel Bell, Judicial Commissioner, Berars, and Major Trevor, First Assistant Resident. His Excellency inspected all the records of the Revenue Survey Offices and personally tested the measurement and classification of a few fields of the village of Hursool. In the foregoing pages of this memorandum I have already quoted extracts from His Excellency's diary on the subject, and I will here give another extract regarding the result of the tests taken in His Excellency's presence:—

"Having seen the Hursool Serai I went to the field I had selected, and had it measured in my presence. All offshoots, bases, boundaries, and perpendiculars were measured by means of a cross staff and chain, without the slightest mistake. The results were reduced to writing then, and they were found to tally exactly with the field book and map prepared in the Settlement Office.

"This satisfied me as regards the correctness of the survey. Having accomplished this, I returned to Camp, it being too warm to go any further. At 2 o'clock went to the field which Mr. Fitch had measured by means of a Theodolite. He remeasured it again in my presence. But since the results of the measurement could not be known at the time, I requested Mr. Fitch to forward them, when reduced, for my information. On my way back to Camp went to the piece of land I had selected for classification. Four officers acquainted with this branch of the survey work, one of whom was Syed Ali, the Geologist,

went through the process for me. They dug the field which was of 12 acres in twelve different places, and in my presence examined the soil according to the rules laid down for classification. I was glad to see that the result of their several examinations were correct, being exactly the same as formerly arrived at by the classers. In my opinion the work of classification here is done properly and accurately. On my return to Camp Mr. Fitch showed me that the result of his remeasurement by Theodolite, and that taken by cross staff and chain were exactly the same, there not being the difference of even one per cent. between them. This proves the great accuracy of the work."

On the 28th of January, the Resident, Col. Bell, and Major Trevor, visited the Survey Offices in company with His Excellency, and the record of their visit is thus made in His Excellency's diary of that date, which I quote here:—

"After two o'clock in the afternoon the Resident, Colonel Bell, and Major Trevor paid a visit to the Settlement Office, the Revenue Secretary, Moulvie Mahdi Ali, prefaced the inspection with a brief account of the reasons which had induced His Highness' Government to undertake a Revenue Survey and Settlement, and to prefer for that purpose the system in force in Berar. Six months, he said, had been devoted to making trials of the different systems pursued in the N. W. Provinces, Bombay, and Berar respectively, and at last the system pursued in Berar had been adopted as the most suitable to the circumstances of the country. He then explained how men had been trained for the work, producing the examination papers, by which candidates thus trained had their knowledge tested, showing what pains had been taken in training them. With the exception of 95 *Mosenidars* and classers one *Muddudgar* or Assistant Settlement Officer, the entire staff had been trained in this country, and consisted of all classes,

Mahomedans, Parsees, Brahmins, and others. The Settlement Officer, Mr. Furdoojee, then submitted the survey and classification papers of one village, which were declared to be perfectly regular and correct by Colonel Bell. The work done by Assistant Settlement Officers was then examined, the manner in which they checked survey and classification operations, and filled up returns of their part of the work, showing that since operations were commenced, complete records of supervision, and forms and returns of regular orders have been kept in the files of the Settlement Officer. The manner in which checks and counter-checks are provided, from the survey up to the Sudder-ool-Maham, was then explained to the visitors and the day-book was shown. The statements showing the work done up to the present moment, and the cost of it, were then laid before the party, and the Resident expressed his approval of both. The Assistant Settlement Officer's office was then visited, where the method of keeping accounts and the work done in the godown (for apparatus) were exhibited to the visitors. I have seen them before and recorded my approval of them in my diary in the entry for 25th Mohorum (8th January 1880). Like me, the Resident, too, was pleased with what he saw, and said to Furdoojee that he thought the work done was satisfactory."

The following copy of a note from the Resident to the address of His Excellency the Minister will show that Sir Richard Meade was very much pleased with his inspection of the Survey Offices:—

AURANGABAD, 29th January, 1880.

MY DEAR NAWAB,

Now that I understand we have finished all that your Excellency wished me to see in connection with the affairs here, I think I may assure you in this way of the very great gratification that has been afforded me by this opportunity of observing their condition and working.

The state of the buildings and the general character of the manner

in which the work is carried on, so far as can be gathered from all that came before me, are in every respect excellent and reflect much credit on the officials in whose hands the control of the same lays.

The work and records of the Survey Department appeared to me to be admirable and to leave nothing to be desired, and the care that has been bestowed on everything connected with this Department was very striking.

The settlement operations are of course quite distinct from the survey work, but I gathered that they are being conducted with equal care.

I will only add that the state of the offices is worthy of the grand city in which they are located, and that it was a real pleasure to visit them.

Altogether I cannot thank your Excellency too heartily for the great treat you have afforded to Lady Meade and myself by this most interesting visit to Aurangabad and its charming surroundings. All our party will carry away with us most pleasant memories of this trip.

Believe me,

Yours very sincerely,

(Signed) RICHARD MEADE.

I will now proceed to notice the difficulties the survey had to contend against at the outset, and will briefly note the obstacles that are even now met with. It was not to be expected that hereditary village officers who hold a great part of the lands of each district at very low, and sometimes nominal rates, and petty revenue officers who acquire illicit gain at every annual settlement, should look upon the survey with a favourable eye. And it is easily conceivable that this large body of officials should incite Tehsildars, and other revenue officers, to a spirit of passive resistance. As anticipated the survey met with a certain amount of opposition which was gradually removed by the method I adopted of recommending Government to promote those Tehsildars who assisted us, and to punish recalcitrant officers by reducing them and transferring them to other

districts. Owing to the position I held as Revenue Secretary, besides being Survey Commissioner, I was enabled to secure the co-operation of the Revenue authorities; and I may, in great measure, ascribe it to my personal influence that such co-operation was extended to the survey. In spite of all this, the opposition made itself felt in several ways. For instance, one or two district officers, knowing very well that survey operations were shortly to be started in their districts, attempted to forestal us by getting a rough survey of the district made by the village Patwadis, and by raising the assessments on lands generally.

Here I would mention one important work which has been done by the Revenue Survey in the Aurangabad, Beed, and Parbhaini Districts, and that is the settlement of long standing Boundary disputes, which have been a fruitful source of quarrel among the *raiat*s of the villages in which they existed. This is what His Excellency the Minister is pleased to record on the subject in his diary of the 17th January.

"As regards the decision of the Boundary disputes, the total number of disputes which have arisen since the formation of the Department is 408; of this number 177 were in respect of Jagher and Government lands, and 281 between Government villages. Of the first-mentioned class 117, and 272 of the second class, have been settled, and 19 are pending settlement. Thus, altogether, 389 have been decided; and the decision carried out. Of the lands in dispute 9,481 beegas of Jagher land came to Government, and 6,172 beegas went to the Jagherdars. The Boundary marks have been erected in accordance with the decisions given. Even the Jagherdars who have had to make over hundreds of bigas of land held to belong to Government, have cheerfully helped to carry out the decisions, and have made over the lands to Government. The settlement of

these disputes is, I consider, one of the most difficult duties of the officials of the Department, and they have exercised considerable judgment and discretion in deciding them. It is a matter of considerable difficulty to settle satisfactorily disputes between Jageer holders and the Government, as the former not unfrequently annex portions of Government lands, and refuse to appear when the matter comes on for hearing; even when they do appear, and the matter in dispute is settled, they refuse to allow the erection of Boundary marks upon their lands. Such disputes not only entail a loss on Government, but occasionally lead to bloodshed, and criminal cases also arise from the same cause.

"There have been several examples of this description in His Highness' territories. When the decision of these disputes was entrusted to the Revenue Survey Department, the same difficulties were encountered, but the vigorous action of these officials overcame all obstacles, although in some cases of opposition they were obliged to adopt strong measures, and sometimes the aid of the Police was called in. Eventually all such disputes, many of which had been pending, some indeed being over half a century old, were settled to the satisfaction of either party. In the course of these investigations, it also came to light that the complaints generally made to Government by the Revenue officials regarding the Jageerdars are not always free from exaggerations. The Patels, Patwaries, and cultivators belonging to Government villages also in some cases are not entirely free from blame. The peaceful settlement, however, of the boundary disputes in this district is sufficient to prove that when Government officials give their decisions with impartiality and discrimination, the Jageerdars willingly meet them half way and abstain from further dispute. On the whole, the officers of this Department are entitled to much credit for having arranged such difficult and delicate matters satisfactorily. The thanks of Government are also

due to Jageerdars who have helped in the settlement of these cases."

Much good work in the way of the settlement of these boundary disputes had been done, and was still in progress, when about two years ago orders were issued by the Revenue Minister to the effect that whenever disputes were settled between a Government village on one side and a Jageer village on the other, and when any portion of the disputed land was given to the latter, the Superintendent's decision in the case was to be sent up to Government for sanction. It was pointed out, at the time, to the Revenue Minister, that this procedure was opposed to the practice prevailing in the British surveys, especially in the Berar Survey, and that it would involve considerable delay, in the preparation of the village and taluka maps. The Revenue Minister, however, was pleased to overrule these objections, and consequently, latterly, these decisions have been sent up to the office of the Revenue Minister for sanction. In nine cases out of ten, the papers in these boundary dispute cases are returned for further enquiry, and various explanations are called for. Now this careful sifting and weighing of evidence, the institution of minute enquiries on every point connected with the case, the examination of documents which generally are difficult to accept as genuine is well enough in civil suits, where there is not only a trained agency provided to do the work, but where the statute of limitation applies as a bar against the adjudication of cases which go beyond a certain period of time. But in the survey we have to work with individuals who are excellent measuring officers, but who make indifferent judges, and we have to inquire into disputes which in most instances are upwards of half a century's standing. It will be seen from the following extract made from the well known joint Survey Report, that the

founders of the Bombay Revenue Survey thoroughly understood this difficulty :—

“ All the more important of these disputes are of long standing, and, in the majority of cases the land has been waste from time immemorial, and rendered of little value to any party by having been converted into a contested grazing ground for the cattle of the several villages claiming any part of it. There is generally no evidence whatever in proof of the original limits, beyond a few vague entries in some of the old village papers which, even if we could depend upon their authenticity, cannot be relied on as affording a true statement of the extent of the dispute at the time they were written; since it was frequently the interest and practice of the village accountant to enter the dispute as larger than it really was, in order to obtain from Government a corresponding deduction from the rental due from the village.

“ Such being the case, it seems aiming at impossibilities to attempt to restore with exactness the original boundaries, and any expensive or elaborate investigations having this object in view would prove labour in vain, and would, by investigating the case with undue importance, be found to strengthen the animosity of the contending parties, and to excite on both sides a renewed desire for victory; so that the very elaborateness of the means taken to secure a just decision, instead of promoting that end, would seem to raise an additional barrier in the way of satisfactory settlement. The less importance, therefore, attached by the authorities to these disputes, the more readily will their adjudication be effected and acquiesced in. Moreover, the partition of the disputed land, however made, can hardly fail to confer a benefit on all the parties interested by enabling them to bring their assigned portions under cultivation, and to

obtain a certain and often valuable return, in place of a contested pasturage shared by all, and conferring little benefit on any.”

After this, I need not say that it is “aiming at impossibilities” to attempt to administer true justice in these matters. The Assistants and the Superintendent who are on the spot, who generally personally inspect the disputed boundaries, and who can judge of the truthfulness or otherwise of the witnesses by their behaviour when giving evidence, are in a much better position to arrive at a correct judgment in the case than officers at Head Quarters who have to base their decisions only upon what is recorded in the papers. It is simply a waste of time to raise nice points of law, to sift and weigh conflicting evidence, and to scrutinize documents which bear no mark of authenticity, in a dispute which is perhaps of a hundred years’ standing. Then again it should be remembered that we have powerful Jageerdars to deal with, who may have held possession of the disputed land for a number of years. In dealing with such cases, it has been generally found desirable by the Survey officers to effect a kind of compromise, when the evidence was conflicting, by giving a portion of the land in dispute to the Jageerdars, and thus bring a long and unprofitable dissension to an end. This mode of procedure has been found to answer more effectually than that which was usually adopted by Revenue officers before us, merely to record decisions which were never executed, which resulted in interminable correspondence, and which were a fruitful source of contention between the *raiate*s of Government and Jageer villages. If the returns in connection with the boundary dispute settlements are studied, it will be found that something like 65 per cent. of the land in dispute has been given to Government and only about 35 per cent. to Jageerdars. It will thus be seen that the Government have gained considerably and have also the satisfaction of having

many long standing disputes of this nature brought to a termination. At present the orders of the Government are that where the evidence is conflicting on both sides, no benefit is to accrue to the Jageerdar from it, but that all the land in dispute is to be given to the Government. In cases where the Jageerdars are in possession of the disputed lands, this ruling operates very prejudicially to them, and it is difficult to induce them to admit the justice of it. With all due deference, I would respectfully observe that the orders on this head are not judicious, and are calculated to cause friction between the survey officials and Jageerdars, which will result in the latter preventing the boundaries from being laid down. This will not only lead to constant references being made to Government, but will cause great delay, than which nothing is more detrimental to the successful carrying out of the survey operations.

The following statement will show in detail the number of boundary disputes that arose from 1285 down to 1290 Fasli; the number of cases decided (1) between Government villages only, and (2) between Government and Jageer villages, and the number remaining to be decided at the end of the year 1290 in the North-West Division :—

No. of Districts Filed.	NUMBER DECIDED.															No. remaining undecided at the end of the year.						
	1387			1388			1289			1290			TOTAL.									
Fiscal Year.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
	1287	102	86	138	100	73	173	2	10	12	...	2	2	...	...	1	102	86	188	...	...	...
	1288	84	58	142	...	...	...	74	32	106	10	26	36	...	...	...	84	58	142	...	...	...
	1289	69	39	108	...	...	...	...	...	...	...	66	28	94	3	11	14	69	39	108	...	...
	1290	89	33	122	82	21	103	82	21	103	7	12	19
Total	344	216	560	100	73	173	173	76	42	118	76	56	132	85	33	118	337	204	541	7	12	19

From the foregoing statement, it will be observed that out of 597 cases taken on file, only 293 have been decided, and as many as 304 cases have been left undecided. I may here state that nearly half of these undecided cases have been sent up by the Assistants for sanction to the boundary settlement officer, and most of them have been returned to the former by the latter, either for further inquiries, or for explanations on different points. In justice to Mr. Hormusji I must mention that this delay is in a great measure due to the obstacles placed in his way by the Jageerdars connected with the cases.

The following statement will show the number of disputes taken on file, and the number settled in the Western Division by the Survey Assistants :—

Fasil Year.	Cases Filed.			Cases Decided.												Cases Un- Decided.		
	Khalisa.	Jageer.	Total.	1257 Fasil.			1258 Fasil.			1259 Fasil.			1260 Fasil.			Total.		
1	2	3	4	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	137	80	217															
2	8	...	8	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	5	6	7															
3	8	45	13	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	58	18	58															
4	54	8	62	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	54	8	62															
5	17	59	76	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	17	59	76															
6	124	80	204	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	124	80	204															
7	13	...	13	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	13	...	13															
8	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
9	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
10	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
11	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
12	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
13	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
14	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
15	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
16	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
17	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
18	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
19	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
20	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
21	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
22	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
23	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
24	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
25	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
26	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
27	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
28	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
29	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
30	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
31	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
32	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
33	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
34	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
35	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
36	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
37	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
38	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
39	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
40	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
41	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
42	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
43	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
44	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
45	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
46	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
47	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
48	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
49	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
50	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
51	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
52	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
53	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
54	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
55	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
56	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.
	21	92	113															
57	21	92	113	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.	Total.	Khalisa.	Jageer.							

From the above statement it will be seen that in all 217 cases of boundary disputes were taken on file, and of these 204 were settled, leaving only 13 cases undecided at the end of the year 1290, which is very satisfactory indeed.

Having in the preceding pages given a brief outline of the circumstances under which the Revenue Survey was first started, and the manner in which the work was, and is now, conducted, I now proceed to give an account of the results attained.

From 1285 down to 1290 Fasil, the measurement work turned out by the two surveys in the North-Western and Western Division amounts to about 81,32,986 acres. The following table will afford detailed information on this head :—

Division.	No. of Villages Measured.	Survey Numbers.	Area measured in acres.
1	2	3	4
North-Western	2,529	2,25,554	34,27,867
Western	1,212	1,31,308	47,05,119
Total.....	3,741	3,56,862	81,32,986

I may here state that the measurement operations were started in the N. W. Division about the middle of the year 1285, and in the Western Division about the beginning of the year 1287. Hence the difference between the two Divisions as regards the amount of work turned out.

During the present season, the amount of work turned out by the two surveys may be roughly estimated as follows :—

N. W. Division, acres	5,01,856
W. Division "	7,36,037
Total.....	16,37,896

The total measurement work turned out by the two

surveys, up to the season of 1991 Fasli, may therefore be set down at 98,20,844 acres.

In the North-Western Division, the Aurangabad and Beed Districts, and four talukas of the Parbhani District have been measured. In the Western Division, the measurement of the Naldurg, Bider, and Lingsugur Districts has been completed, and the work remains unfinished in one taluka of the Shorapoor District.

The following statement will show the number of fields and area submitted to test in each Division, down to the year 1290 :—

Division.	No. of Fields and Area Tested.		Test Percentage on Measurement Work.		Average Difference between Measurement and Test per cent.	
	Fields.	Acres.	Fields.	Acres.	Acres.	Gunta.
N. Western.	24,139	5,55,262	10½	10½	1	½
Western ...	12,940	2,95,748	10½	10½	...	26½
Totals ...	37,079	8,51,010	10½	10½	...	33½

The percentage of the fields tested in the two surveys is very satisfactory, being 10½ per cent. of the total number of fields measured. The percentage of area tested is 10½ in the North-Western and 10½ in the Western Division. The average difference between original measurement and test is 1 acre ¾ guntas in the North-West, and 26½ guntas in the Western Division. The reason for the difference being greater in the first than in the second Division lies in the fact that in 1285, when the survey operations were first started in the Paitan Taluka, the work done was not very correct, the difference between original measurement and test for that year being 2½ acres. Hence the average difference in the North-Western Division is somewhat high.

The following statement exhibits in detail the difference between the tests and original measurements :—

Division.	No. of Fields in which the Difference between Original and Test Measurement did not exceed.					
	Under 1 P. C.	1 P. C.	2 P. C.	3 P. C.	4 P. C.	5 P. C. and upwards.
N. Western	1,612 6½	15,914 66	5,581 23	625 2½	217 1	108 ½
Western	794 5½	7,385 56½	4,392 34	398 3	75 ½	90 ½
Total	2,336 6½	23,199 62½	9,973 27	1,023 2½	292 ½	198 ½

The result shown is very satisfactory. The difference in the main portion of the numbers tested is only one and two per cent., and very few numbers go over five per cent.

From 1285 down to 1290 Fasli, the classification work turned out by the two surveys amounts to 48,14,499 acres.

The following table will afford detailed information on this head :—

Division.	No. of Villages Classified.	Survey Number.	Area classed in Acres.
North-West.....	1,750	1,51,197	30,33,396
Western	464	55,863	12,80,903
Total.....	2,214	2,07,060	48,14,499

The work done during the present season may be roughly estimated at about 9,63,382 acres in the North-Western, and 7,94,322 acres in the Western Division. The total

classification work may therefore be set down at 67,87,548 acres.

In the North-Western Division the classification work of the Aurangabad, and all but one taluka of the Beed Districts has been completed. In the Western Division, the work has been finished in the Naldurg District, and classification operations have been started in two talukas in the Bidar District.

The following statement will show the number of fields and area submitted to test in each Division, down to the year 1290 :—

Division.	No. of Fields and Area Tested.		Test percentage on Classers Work.		Average Difference between Measurement and Test per cent.		
	Fields	Acres.	Fields	Acres.	—		
North-Western.	17,856	3,38,755	11½	9½	0	0	5
Western	8,325	1,50,979	14½	11½	0	0	5½
Total.....	26,081	4,89,734	12½	10	0	0	5½

The percentage of the fields tested in the two surveys is very satisfactory, being 11½ in the first and 14½ in the second Division. I may explain that in the North-Western Division there are only two officers in each classing establishment, while in the Western Division there are three, hence a higher percentage of test work has been done in the latter as compared with the former. The percentage of area tested is 9½ in the North-Western and 11½ in the Western Division. The average difference between original measurement and test is five pies in the first Division and 5½ pies in the second, which, I need not say, is very satisfactory.

The following statement exhibits in detail the difference between the test and original classification :—

Division.	No. of Fields in which the Difference between Original and Test Classification was						
	Ra.	From 1 Pie to 6 Pies.	From 7 Pies to 1 Anna.	From 1½ Annas to 1 Annas.	From 1½ Annas to 2 Annas.	From 2 Annas to 2½ Annas.	From 2½ Annas to 3 Annas.
North-Western.	2,159 12½	10,176 57	4,133 23½	1,677 6	239 1½	41 1½	20 5
Western.....	1,399 17	4,567 55½	1,604 19½	444 5½	145 2	41 1½	20 5
Total.....	3,558 13½	14,743 56½	5,737 22	1,521 5½	284 1½	82 1½	40 5

The result shown is very satisfactory. 98 per cent. of the numbers tested fall within two annas, and only two per cent. go up to two annas and over. In the North-Western Division, the difference exceeding 1 anna 6 pies is 1½ per cent. ; in the Western Division it is 2½ per cent. This proves that the classification work has been most correctly and carefully executed.

The total expenditure of the two surveys, from 1285 down to 1290 Fasli, and on which the cost per acre of the survey operations has been calculated, amounts to Rs.11,27,438-2. The subjoined table will afford the necessary information on this head, for details see Statement A appended to this Memorandum :—

Fasli Year.	MEASUREMENT.				CLASSIFICATION.				Total Expenditure on Measurement and Classification.	Rs. a. p.	Rs. a. p.	Cost per Acre of the Expenditure shown in Column 8.	
	Total Area Measured.	Expenditure on the Area Measured.	Rs. a. p.	Cost per Acre.	Total Area Classified.	Expenditure.	Cost per Acre.						
1	2	3	4	5	6	7	8	9	10	11	12		
	Acres	G.	Rs. a. p.	Rs. a. p.	Acres	G.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.			
1285.....	1,92,709	0	21,013	3 9	0	70,569	0	7,507	7 9	0 1	9½	28,910 11 6	0 3 6½
1286.....	8,79,199	0	97,075	0 0	0 1	1,88,758	0	5,121	0 0	0 0	5½	1,69,196 0 0	0 2 3½
1287.....	7,21,502	5	1,83,175	12 6	0 1	6,90,613	4	20,641	15 6	0 0	5½	2,60,217 11 6	0 2 2½
1288.....	30,39,407	6	2,23,813	15 8	0 1	8,64,869	17	20,206	13 3	0 0	7	2,54,120 12 11	0 2 4
1289.....	30,39,524	18	2,09,830	10 2	0 1	14,43,050	13	78,158	13 8	0 0	11	2,76,980 7 10	0 2 5½
1290.....	13,37,605	14	1,09,779	9 5	0 1	16,37,219	12	1,00,222	12 16	0 0	11½	2,60,063 6 3	0 2 5½
	81,82,948	3	8,67,688	3 6	0 1	82,48,14,499	6	2,39,749	14 6	0 0	9½	11,37,438 2 0	0 2 6½

From the foregoing statement it will be observed that the cost per acre of measurement operations amounts to 1 anna 8½ pies; of classification to 9½ pies; and the cost of the combined operations including settlement amounts to 2 annas 6½ 9½ pies per acre. 2 annas 6½ pies Halli Sicc amounts to 2 annas 2 pies Government currency, which, I need not say, is very satisfactory. I may mention that the cost of the Survey Commissioner's office establishment amounting to Rs. 1,56,726 is not included in this; if it is, the cost per acre would amount to 2 annas 10½ pies per acre.

The total expenditure on the erection of boundary marks from 1285 to 1290 Fasli amounts Rs. 12,37,429-6-3. Of this cost, the sum of Rs. 11,81,971-11-3 spent on erecting marks on occupied lands has been, and is being, recovered from the cultivators, and Rs. 55,457-11 expended on erecting marks on waste lands has been included in the cost of the survey. The subjoined statement will afford detailed information on this head:—

Fiscal Year.	NORTHERN DIVISION.			WESTERN DIVISION.			TOTAL OF BOTH DIVISIONS.		
	2	3	4	5	6	7	8	9	10
	Boundary Mark Expenditure on occupied lands.	Expenditure on Waste Lands.	Total Expenditure.	Boundary Mark Expenditure on occupied lands.	Expenditure on Waste Lands.	Total Expenditure.	Boundary Mark Expenditure on occupied lands.	Expenditure on Waste Lands.	Total Expenditure.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
1886	62,400 11 4	22,229 4 6	1,14,730 0 1	.....	.....	.....	62,400 11 4	22,229 4 6	1,14,730 0 1
1887	1,72,105 11 2	22,248 14 9	1,94,354 9 11	62,636 5 8	10 10 3	62,636 15 6	2,34,732 0 5	22,259 9 0	2,56,991 9 5
1888	1,62,200 9 3	5,336 5 6	1,67,768 14 0	4,42,669 8 0	174 12	61,43,114 4 6	3,05,170 1 3	5,711 2	63,10,881 3 3
1889	1,70,920 0 0	1,030 14 6	1,80,970 14 6	1,49,661 12 3	.....	.....	3,29,011 12 3	1,050 14	63,30,922 10 9
1890	1,22,525 12 3	4,196 12 6	1,30,722 9 0	97,441 5 9	.....	97,441 5 9	2,19,967 2 0	4,196 12	92,54,163 14 9
Total	7,29,272 12 0	55,372 4 3	7,84,545 0 3	4,52,668 15 3	185 6	94,32,884 6 0	11,81,971 11 3	53,457 11 0	12,37,429 6 3

In the North-Western Division, survey rates have been introduced in eleven talukas of the Aurangabad District, and in one taluka of the Beed District. In the Western Division six talukas of the Naldurg District have been settled. The following table, abstracts from statements C and C1, will show the difference between the old rates and the survey settlement rates in each Division:—

North-Western Division.

OLD RATES.			SURVEY RATES.		
Acres.	Assessment.	Average Rate per Acre.	Acres.	Assessment.	Average Rate per Acre.
19,76,733	19,08,002	0 15 5	22,08,502	21,89,316	0 15 19

Western Division.

OLD RATES.			SURVEY RATES.		
Acres.	Assessment.	Average Rate per Acre.	Acres.	Assessment.	Average Rate per Acre.
7,08,933	7,30,212	1 0 6	9,91,584	8,40,104	0 13 6

From the foregoing statement it will be observed that in the N. W. Division the survey measurements show an increase, as compared with the old recorded area, of something like 2,32,069 acres or 11·7 per cent. In the same manner the new rates have increased the assessments by Rs. 2,91,314 or 14·7 per cent. It must, however, be noted that there is very little difference in the old and new rates as regards the average rate per acre, which is 15 annas 5 pies, according to the old rates, and 15 annas 10 pies according to the survey rates, which gives an in-

crease of only five pies, which I need not say is very satisfactory.

In the Western Division, the survey measurements show an increase, as compared with the old recorded area, of 2,82,751 acres or 39·87 per cent. In the same way, the introduction of the survey rates have increased the assessments by Rs. 1,09,892 or 15·05 per cent. The old average rate per acre was Rs. 1-0-6, the survey rate is Rs. 0-13-6. It will thus be seen that notwithstanding the increase in the amount of assessments, the average rate per acre is much lower now than what it was before.

The two statements marked D and D 1 appended to this Memorandum will give detailed information as to the area of occupied and waste lands, with the average rate per acre, in each of the settled talukas.

The survey operations have not tended to enhance the revenues to any great extent, for this reason that the old rates of assessment had reached their maximum limits, and this did not leave much margin for any great increase. Our Talukdars understand the art of increasing the revenues by fixing heavy assessments, and so there was not much scope for increase left to the Revenue Survey. The progress the surveyed districts have made during the past twenty odd years will be seen from the two statements B and B 1 hereunto appended. A study of these statements will show that very considerable and substantial progress has been made in the agriculture of the district, as regards the number of cultivators and the cultivated area. There has been also a proportionate increase in the assessments. Hence the Revenue Survey did not in any way enhance to any extent the revenues, but it served the purpose, for which it was intended, of equalizing the assessments. I will quote on this subject from Mr. Furdooji's Settlement Report of the Paitan Taluka :—

“ 77. I would here observe that the increase of revenue

“ obtained is not the result of any general enhancement
 “ of assessment rates, but is mainly due to more accurate
 “ measurements, by which an increase of 19,000 acres of
 “ cultivated land has been attained over the cultivated area,
 “ as shown in the Tehsil records. I would also remark that
 “ the rates of assessment seem, in many instances, to have
 “ been very unequally distributed in the Paitan taluka. I
 “ will give an instance in point. The villages of Sioni and
 “ Chincholi adjoin one another. According to our classification scale, the average value of the lands of the former village is eight annas, while that of the latter is eight annas and six pies. The difference between the value of the lands of both villages is almost inappreciable. And yet there exists an enormous difference between the average rates of assessment of the villages in question, for Sioni pays only six annas and three pies per acre, while, for the same description of soil, Chincholi pays 12 annas and eight pies per acre. The difference between these rates is more than a hundred per cent. The subjoined statement is illustrative of the unequal apportionment of the assessment over the villages of this taluka : the villages included in brackets adjoin one another :—

hitherto settled in the N. W. Division amounts to Rs. 4,65,494. Deducting from this amount the sum of Rs. 3,33,277, being the nett increase of revenue resulting from the introduction of survey rates, as shown above, a balance of Rs. 1,32,217 is left. Calculating on this data it may be said that in about one year more, the cost of the survey in the talukas hitherto settled will have repaid itself. In the same way, the total cost of the survey in the six talukas of the Naldurg District, in which the survey rates have been introduced, amounts to Rs. 2,01,969. Deducting from this amount the sum of Rs. 1,19,841, being the nett increase resulting from the survey settlement, as shown above, a balance of Rs. 82,128 is left. This will be recovered in about one year. It will thus be observed, that the Revenue Survey Department is in a fair way of shortly paying its own expenses, and that besides the numerous benefits it has conferred on the country, it will in future bring in revenue to Government. For detailed information see statements F appended to this Memorandum.

A glance at statement B appended to this Memorandum will show an annual falling off in the revenues in some of the talukas in the Aurangabad District, in which the survey rates have been introduced. The cause of this falling off is not far to seek. The famine of 1876-77 has left its mark on the Gandapur, Vaijapur, and Paitan Talukas, and hence in that tract of country, the impoverishment of the raiats has led to the contraction of their holdings. Before the introduction of the survey most of the Tehsildars had, as a rule, refused to allow the cultivators to contract their holdings, and this naturally enough tended to impoverish the raiats. The revenue officers, under a mistaken notion that they were benefitting both the Government and the raiats, discouraged the practice of allowing the latter to relinquish parts of their holdings.

In paragraph 6 of the Joint Report it is stated :—
“ One manifest advantage of breaking up the assessment of

“ a village into portions so minute is the facility it affords
“ to the cultivators of contracting or enlarging their farms
“ from year to year, according to the fluctuating amount of
“ agricultural capital and stock at their disposal, which is of
“ incalculable importance to farmers possessed of so limited
“ resources as those of the cultivating classes throughout
“ India.” Again in paragraph 7, it is stated :—“ The loss
“ of a few bullocks by disease, or other causes, may quite
“ incapacitate a raiat from cultivating profitably the extent
“ of land he had previously in tillage, and without the privilege
“ of contracting the extent of his farm, and consequent liabilities
“ on occasion of such losses, his ruin would
“ be very shortly consummated.”

It will easily be understood that, forcing upon the cultivators more land than they are able probably to till is to consummate their ruin. Before the introduction of the survey the raiats had more land than they were able to bring under the plough, and even now, when many of them have relinquished great portions of their holdings, they have on an average perhaps a little more land than they can properly till. This will readily be understood from the following table :—

Name of Division.	No. of Registered Occupants.	Number of Bullocks.	Cultivated Area in Acres.	Average Area per each Occupant.	Average Area in Acres per each pair of Bullocks.
N. W. Division.	35,668	1,57,524	19,01,195	53.3	24.1
W. Division ...	17,053	92,081	9,56,114	56.1	20.8

From the foregoing statement it will be observed that in the N. W. Division, on an average, there are 24.1 acres to each pair of bullocks, whereas a raiat is only able to till about eighteen to twenty acres of land with a pair of bullocks. In the Western Division the average is very fair. For details see statements E and E I appended to this Memorandum.

I now understand that the raiats of the talukas of Gandapur, Vaijapur, and Paitan are beginning to recover from the effects of the famine of 1876-77, and that during the present year they have taken up waste lands (to the extent of about Rs. 17,000) that had lately been thrown out of cultivation.

In the talukas of Ambad, Kannad, Bokurdhun, Sillode, and Adjunta, the introduction of the survey rates has been attended with successful results. The Jaulna and Aurangabad Talukas were settled only during the present year, and therefore just now it would be somewhat premature to form any conclusion as to the advantage or otherwise of the new settlement. But from the fact of very little land having been thrown up at the time of settlement, and from the fairly prosperous condition of these talukas, I anticipate that our new rates will work favourably there. The result of the settlement in the Naldurg District has also been very favourable, as will be seen from statement B. 1

It is natural that on the introduction of revised rates in any taluka there should be a certain amount of dissatisfaction amongst those occupants whose assessments have been enhanced. That their dissatisfaction should find vent in petitions to Head-Quarters is also natural enough. Hence I have received a few petitions from different interested Patels, Patwadis, and sometimes *raiats*, complaining of enhanced assessments. As a rule, I have in reply informed the petitioners that as their fields had been accurately measured, and classed, and that as a moderate assessment had, with the sanction of Government, been imposed upon their village, no steps could be taken in the matter of their complaints. Before the introduction of the survey, whenever any raiats relinquished their holdings on account of enhanced assessments, the Tehsildars used to call them together, and by dint of persuasion, and some sort of compromise, prevailed upon them to take back their lands. The raiats are therefore under the impression that they

have but to complain or throw up their holdings, when the same sort of persuasion would be used with them. In dealing with the raiats a little firmness is very necessary. When settling a portion of the Paitan Taluka, the raiats of the village of Mumdapur, the assessment of which had increased by something like 300 per cent., threw up their lands. I at once accepted their resignations of their holdings, and at the same time informed them that the lands they had relinquished would be given to the raiats of other villages. A few days subsequent to this, when I was at Ahmednugger, on my way to Hyderabad, the raiats came to me in a body and begged most earnestly that their lands should be given back to them at the new rates, and that I should forgive them for having so thoughtlessly relinquished their holdings.

The introduction of survey settlement in the different talukas was followed by a change in the forms of the village papers prepared by the Patwadis. The old forms were very complicated, and inconveniently large, and conjointly with the new settlement, it was necessary to introduce new forms. With some slight modifications, Mr. Hope's village forms have been adopted, and they work admirably well in the talukas into which they have been introduced. This measure has curtailed to a considerable extent the work of the Patwadis.

In each taluka, a measurer on a salary of Rs. 25 per month has been appointed to annually inspect the boundary marks, with a view to their future maintenance and preservation. In the event of any dispute arising as to the boundaries of fields the measurer is to proceed to the spot, and settle it with the aid of the village-map. During the first two or three years after the survey settlement he has to inspect all the marks of every village in his taluka, and after that he has to annually inspect a certain percentage of the marks of each village.

No work in the different branches of the survey has been allowed to fall into arrears. The classification has kept fair pace with the measurement; and, as a rule, the settlement has closely followed on the classification. To bring the three different operations of the survey as close to one another as possible, it has been at times necessary either to reduce or strengthen the different measuring and classing establishments.

All the accounts of both the Superintendents' offices have been made up to the end of the year 1291 Faslî, and have been finally adjusted in the Accountant General's office. All vouchers for expenditure incurred have been submitted to the Accountant General, and sanction has been obtained for every item of expenditure incurred up to the end of that year.

It must not be imagined that when once a settlement has been introduced into any one district, there is nothing more left to be done. The working of the settlement will entirely depend upon the Talukdars and Tehsildars. If these officers take an interest in their work, and understand it thoroughly, the new settlement will work very satisfactorily, and prove of great benefit both to Government and to the raiats. If they are careless, or if they don't understand the system on which the settlement has been made, then there will be grave fears of its proving anything but advantageous to the Government and to the raiats. To insure the satisfactory working of the survey settlement it is essentially necessary that the Talukdars and Tehsildars should be appointed from among the survey officers. Towards this end, it will be necessary to have a few extra officers attached to the Survey Department as supernumeraries, so that they may be ready to take the place of any Assistants or Sub-Assistants when they are transferred to the Revenue Department in the surveyed districts. Some time ago I had submitted a report on the subject to Government, and they

were pleased to direct that in the Aurangabad District, none but the officers from the survey should be appointed in the Revenue Department. If this is not feasible, then I would suggest that all the second and third Talukdars and Tehsildars in the surveyed districts should be attached to this Department for a time, so that they may be made *au courant* with the working of the settlement.

Before concluding this Memorandum, it is necessary that I should place on record the highly valuable services that have been rendered to the Survey Department by the two Superintendents and my Assistant.

I have pointed out the difficulties I experienced at the outset in organizing the Department. It was not an easy matter when I first started the survey, to get a capable officer whom I could place at the head of the Department. I was, however, fortunate in selecting for this post Mr. Furdooji Jamshedji, who was acting second Talukdar of the Aurangabad District, when I first met him there in 1875. Young, energetic, intelligent, well informed and thoroughly well grounded in revenue work, he was in my opinion the best officer to whom I could entrust the work. Personally he did not care to join the Revenue Survey, but on my applying to Government they were pleased to transfer his services to this Department. At a time when almost every one was new to his work, and when a great opposition existed against the Department, Mr. Furdooji displayed untiring energy, tact, judgment, and ability in the discharge of his duties, and in course of time he was enabled to surmount the innumerable difficulties that came in his way. In short, I may honestly assert that whatever good work has been done in the Aurangabad Survey, the credit of it is deservedly due to Mr. Furdooji, of whose integrity, abilities, and zeal I have formed the highest opinion.

Mr. Kader Beg, who had been trained in the Roorkee

College, and who therefore was thoroughly conversant with scientific surveying, served his apprenticeship in the Revenue Survey as a measuring Assistant for about two years and a half. He conducted his duties with such remarkable abilities, zeal, and diligence, that when survey operations were started in the Naldrug District, I at once placed him at the head of the Department there. He has conducted his duties with integrity, zeal, and ability, and he has all along very closely supervised the work of all his subordinates.

Mr. Aga Shekh Mahomed, my Assistant, was employed for several years as an Assistant Engineer in the Public Works Department, and was very highly thought of by Mr. Wilkinson. He joined this Department in 1288 Faslî. He has been my Assistant since then, and has rendered the Department excellent service by making long tours in the districts, and by personally testing measuring and classing work. The different reports he made of his tours, and which exist in my office, kept me well informed of the work going on. Mr. Shekh Mahomed is a thoroughly upright, able, and honest officer, and has given me every satisfaction.

It would be unfair on my part if I were to make no mention here of the good services that have been rendered by Mr. Vasodeo Trimbak. He has been of great assistance to me in settlement work, of which he had about eighteen years' experience in the Berar. Mr. Vasodeo has a very good knowledge of measuring, classing, and settlement work, and he is an able, well-informed, and honest officer.

Without mentioning each Assistant and Sub-Assistant by name, I would here simply state that, so far as I know, each and all of them, Mahomedans, Hindus, Parsees, and Christians are an efficient body of officers, and they have

by their zeal, diligence, and abilities given general satisfaction.

I have drawn up this Memorandum for the information of my successor, so that he may be cognizant of all the difficulties I had to struggle against, and that he may be informed of the progress the Revenue Survey has made in the Mahratta Districts of His Highness' Dominions during the seven years I have been connected with it.

MAHADI ALI,

Survey and Settlement Commissioner.

Hyderabad Deccan, 1st August, 1882.

Statement showing the amount of Work turned out by the Department
therein together with the

Fiscal Year.	DIVISION.	Total Area surveyed in Acres.	DETAIL OF EXPENDITURE.			
			Salaries of Messengers.	Salaries of Assistants and their Establishments.	Superintendent and Establishment.	Total.
* 1	2	3	4	5	6	7
1285	North-Western.	1,92,709 0	5,316 15 3	8,379 7 0	7,515 15 6	21,613 2 9
1286	Do.	8,72,199 0	25,929 0 0	41,336 0 0	22,770 0 0	97,075 0 0
	Total	10,64,908 0	31,245 15 3	49,715 7 0	37,285 15 6	1,18,965 3 9
1287	North-Western.	1,11,830 5	33,022 15 6	38,075 6 6	43,045 0 0	1,36,142 4 0
1287	Western	4,00,300 0	11,354 6 0	12,395 8 5	25,302 10 2	49,052 8 6
1288	North-Western.	11,00,989 6	32,934 9 6	43,308 8 6	44,300 6 0	1,32,552 7 13
1288	Western	9,26,418 0	21,701 12 6	42,638 1 6	38,880 9 0	1,01,319 7 5
1289	North-Western.	11,14,911 15	37,830 6 0	39,232 4 2	37,887 40 1	1,54,992 4 10
1289	Western	9,25,510 0	23,119 10 6	37,708 7 6	35,515 3 4	96,351 5
1290	North-Western	8,29,448 14	21,039 11 9	36,435 2 6	34,829 16 5	86,003 8 6
1290	Western	4,88,157 0	19,849 4 0	25,005 4 5	28,624 8 2	73,775 0 1
	Total for the N. W. Division.	43,62,752 3	1,15,817 9 3	1,79,071 5 2	1,82,380 10 9	4,63,000 9
	Total for the Western Division	27,55,258 0	76,122 1 0	1,17,337 6 0	1,36,320 15 6	3,78,990 6
	Grand Total	71,18,010 3	1,91,939 10 3	2,96,408 11 2	3,18,700 26 5	8,41,990 15

* Half Shon